

SUBJECT: DEPARTMENTAL MANAGEMENT OF SCIENCE AND TECHNOLOGY

The purpose of this Notice is to establish the Science and Technology Advisor (STA) to the Secretary of Energy, with commensurate realignment of functions within the Department of Energy (DOE).

The DOE Organization Act, in Section 209, establishes the Director of Energy Research as the advisor to the Secretary on matters relating to the Department's research and development (R&D) programs, education and training activities, and management of its laboratories. When the DOE was activated, it was decided to join these statutory advisory functions to the programmatic management of a large R&D portfolio. Over the years, this latter programmatic responsibility began to eclipse the statutory responsibilities of position.

I have determined that the function of a STA to the Secretary of Energy must be strengthened and reorganized both to comply with existing law and to:

- o Provide me with impartial technical advice on DOE R&D activities on an ongoing basis;
- o Provide a high-level focus of concern in DOE Headquarters for the overall vitality of the DOE National Laboratories, both as individual institutions and as a collective intellectual resource for the Nation; and
- o Provide overall departmental coordination of crosscutting science and technology issues such as technology transfer implementation, education, and small business innovation research, ensuring that departmental and national priorities are accurately reflected in the content and orientation of these programs.

This Notice describes the specific functions of the STA, as well as the functions of supporting organizations headed by Deputy Science and Technology Advisors (DSTAs) and a Director of Technology Utilization (DTU). Where appropriate, the interaction of the STA and these organizations with departmental functions and authorities exercised by other Secretarial Officers is described. This Notice applies to all of the scientific and technical activities and operations of the Department of Energy with the exception of the Naval Reactors program.

RESPONSIBILITIES FOR SCIENTIFIC AND TECHNICAL ADVICE ON DOE RESEARCH AND DEVELOPMENT ACTIVITIES

Roles and Functions of the STA

The STA provides the secretary, on request, with scientific and technical advice on DOE R&D projects, programs, plans, and policies. This may include advice on the following topics:

- o External scientific and technical developments relevant to the missions and activities of DOE;
- o Opportunities to exploit the application of DOE-developed science and technology within the DOE infrastructure;
- o Productive areas for cooperation among the science and technology programs funded by individual elements of the DOE;
- o The balance and effectiveness of DOE support and utilization of researchers in universities, industry, and the DOE laboratories; and
- o Ways to improve and maintain productive relationships among DOE laboratories, universities, and industry.

The STA may convene meetings of Program Secretarial Officers (PSOs) or their designees to discuss R&D issues that span individual elements of DOE.

The STA also assists the Chief Financial Officer and the Deputy Under Secretary for Policy, Planning, and Analysis (PE-1) in scientific and technical aspects of institutional processes for strategic plans, multi-year plans, and budget proposals. This may include assistance in formulating calls, technical review of inputs from PSOs, and assistance in identifying other Departmental options for consideration by the Secretary.

As appropriate, the STA provides individual PSOs, at their request, with independent assessments of specific projects, programs, and strategies.

As assigned, the STA represents the Secretary in interagency, inter-governmental, and significant public/private assessments of scientific and technical opportunities and priorities.

The STA may address other issues related to the science and technology programs of the Department, as directed by the Secretary.

The DSTAs assist the STA in the performance of these responsibilities, as required.

Relationship to Existing Roles and Functions within the Department

PSOs continue to have full line management responsibility to the Secretary for their respective R&D programs.

The oversight responsibilities of the Assistant Secretary for Environment, Safety, and Health and the Director, Office of Nuclear Safety, as described in SEN-6, remain unchanged.

The crosscutting responsibilities of the Director, Office of Environmental Restoration and Waste Management, described in the September 1989 "Memorandum of Agreement Among DOE Offices with Respect to Environmental Management of DOE Facilities," as amended, and SEN-6, remain unchanged.

The Office of Policy, Planning, and Analysis continues to be responsible for evaluating the relevance of DO programs to overall DOE and Administration policies, including the National Energy Strategy. The Director, Office of Planning and Analysis, continues to exercise primary responsibility for the Department's Strategic Planning Initiative, as described in SEN-25.

RESPONSIBILITIES FOR INSTITUTIONAL MANAGEMENT OF THE DOE MULTIPROGRAM LABORATORIES

Roles and Functions of the Cognizant Secretarial Officer and Program Secretarial Officers

For purposes of this Notice, a multiprogram laboratory is a major departmental laboratory which conducts significant tasks for several PSOs. Each multiprogram laboratory has a Cognizant Secretarial Officer (CSO), who is responsible within DOE Headquarters for institutional management of the laboratory. This includes ensuring that each laboratory conforms to applicable operational, environmental, safety, health, and security standards established by law, regulation, or departmental policy.

The current CSO assignments for each multiprogram laboratory are as follows:

Laboratory

Lawrence Livermore National Laboratory	DP-1
Los Alamos National Laboratory	DP-1
Sandia National Laboratories	DP-1
Idaho National Engineering Laboratory	NE-1
Argonne National Laboratory	ER-1
Brookhaven National Laboratory	ER-1
Lawrence Berkeley Laboratory	ER-1
Oak Ridge National Laboratory	ER-1
Pacific Northwest Laboratory	ER-1

In particular, the Assistant Secretary for Defense Programs (DP-1) retains full responsibility for the coordination of all activities performed at the three laboratories for which DP-1 is the CSO, due to the special and unique

national security missions of these laboratories and the responsibility of DP-1 to ensure that these laboratories retain the capability to carry out R&D, design, testing, production, and storage of the Nation's nuclear weapons arsenal in accordance with Presidential directives.

The CSO, in coordination with the Office of the Chief Financial Officer and the Office of Administration and Human Resource Management, is responsible for overall approval of work for non-DOE sponsors at each assigned laboratory, with the exception of intelligence-related work. The Director, Office of Intelligence, continues to be solely responsible for approval and reviews of intelligence-related work for non-DOE sponsors.

The CSO and the STA participate in the annual appraisal of laboratory performance carried out by the Field Office Manager to whom each multiprogram laboratory respectively reports.

PSOs have line management responsibility (including planning, budgeting, and execution of program activities) and are fully accountable for their particular R&D programs at the multiprogram laboratories. The STA coordinates with PSOs and CSOs on laboratory policy development activities assigned to the STA described below.

Roles and Functions of the STA

The mission of the STA in relation to the DOE laboratories is to assess the overall strength and vitality of the multiprogram laboratory system and to foster resolution of system-wide issues and concerns (such as the role of the laboratories and policies governing their use). The STA's specific responsibilities include the following:

- o Developing and coordinating departmental policy, and monitoring its implementation, in the following major areas: strategic and institutional planning for multiprogram laboratories, laboratory appraisals, work by the laboratories for non-DOE sponsors, laboratory-directed research and development (LDRD), technology transfer implementation, and education.
- o Advising the Secretary on system-wide laboratory issues, including those that may be identified by the annual Laboratory Institutional Planning Process (cf. DOE 5000.1A) or the Laboratory Appraisal Process (cf. DOE 5000.2A). In carrying out the responsibility to advise on system-wide issues, the STA may convene periodic meetings of Laboratory Directors or other groups to explore generic issues affecting the DOE laboratories.
- o Advising the Secretary on recommendations made by CSOs regarding the scientific and technical management of the laboratories, when it is essential to have a uniform management approach across the multiprogram laboratory system.
- o Advising the Secretary on recommendations made by CSOs concerning plans, management strategies, and allowable funding levels for LDRD.
- o Supporting the CSOs of individual multiprogram laboratories by coordinating the execution of the DOE Institutional Planning Process for Multiprogram Laboratories. The coordination function, including the organization of on-site reviews, is assigned to the appropriate DSTAs as described below in this Notice.
- o Coordinating the integration of inputs from major non-DOE laboratory clients into DOE laboratory and programmatic planning processes.
- o Providing periodic, independent evaluations of the overall R&D performance DOE multiprogram laboratories on measures of quality, relevance, and cost-effectiveness. The appropriate DSTAs will take the lead in organizing these evaluations. Evaluations will utilize, to the extent possible, inputs from PSOs of individual programs within the laboratory and reviews carried out by the laboratory or its Management and Operating Contractor. Evaluations will be carried out in close cooperation with the relevant CSO.
- o Maintaining, through the appropriate DSTAs, general technical awareness of the content, quality, and significance of laboratory work for non-DOE

sponsors (with the exception of intelligence-related work) and advising the Secretary on the relevance of work for non-DOE sponsors to the overall technical strength and mission of each laboratory.

- o Maintaining awareness of landlord funding across the entire multiprogram laboratory complex and bringing disparities to the attention of Lead PSOs of the relevant DOE Field Offices, or to the attention of the Secretary, as necessary.

As requested by either the relevant PSO or the Secretary, the STA may also provide advice on, or assessments of, single-program DOE laboratories and facilities.

RESPONSIBILITIES FOR TECHNOLOGY TRANSFER AND UTILIZATION

Roles and functions of the STA and the Director of Technology Utilization

The STA oversees the Director of Technology Utilization (DTU), a new centralized function. The specific responsibilities of the STA and DTU address Departmentwide issues in technology transfer implementation at utilization activities.

The DTU, with input from the DSTAs, is responsible for developing technology transfer and utilization policies that cut across program lines, definitive interpretation of these policies, and coordination such policies with other agencies.

The DTU, in consultation with affected PSOs, facilitates internal coordination of DOE technology utilization efforts, organizes crosscutting analysis and advice on DOE technology transfer budgets, and is responsible for Departmentwide outreach efforts, including briefings, publications, and meetings.

The DTU, in consultation with affected PSOs, conducts independent assessments of the consistency, relevance, and appropriateness of laboratory cooperative research and development agreement (CRADA) guidelines and allowances on a cross-program as well as a cross-laboratory basis. The DTU also provides input to the STA and the DSTAs on aspects of laboratory management affecting technology utilization.

Because training is an important mechanism for developing a consistent approach to technology transfer implementation across the Department, the DTU, in conjunction with the Office of Scientific and Engineering Recruitment, Training, and Development and affected PSOs, shall develop the tools and training required for DOE technology commercialization activities. The DTU, in conjunction with the General Counsel, shall monitor the implementation of departmental policy on patents and licensing.

Roles and Functions of PSOs

PSOs continue to have primary responsibility for the execution of technology transfer and utilization activities in their programs. PSOs participate in departmental policy development, establish their own internal policies within existing departmental guidelines, provide Headquarters support and oversight of technology transfer efforts in their programs; prepare and manage their own plans, budget requests, and program activities for technology utilization activities; and conduct programmatic interactions with Federal agencies and other external organizations to disseminate information developed by DOE or its contractors.

The Office of the Chief Financial Officer continues to be responsible for issuing formal budget calls and crosscut calls related to technology transfer. These calls are issued in coordination with the DTU and PSOs.

For defense-related technologies, export control considerations and nonproliferation aspects of technology transfer to private industry continue to fall under the programmatic responsibility of DP-1. Classification policy related to technology transfer continues to fall under the programmatic responsibility of the Office of Security Affairs.

RESPONSIBILITIES FOR EDUCATION PROGRAMS

SEN-23-90 established an Office of University and Science Education Programs to coordinate the implementation of all DOE programs in science, mathematics, and engineering education at the precollege and university levels. This Office shall be transferred to the Office of the STA.

ORGANIZATIONAL ARRANGEMENTS

While the Director of Energy Research (ER-1) also functions as the STA, the Office of the STA, which shall support the functions of the STA outlined above, shall be distinct from the research programs of the Office of Energy Research (ER) and shall have a reporting chain to the ER-1/STA that is separate from that of the ER research programs.

The Director of Technology Utilization is established in the Office of the STA and will take over functions supporting the implementation of the Department's technology transfer program currently residing in the Office of Policy, Planning, and Analysis.

A Deputy Science and Technology Advisor for Defense Programs (DSTA/Defense) is established in the Office of Defense Programs. The DSTA/Defense reports to DP-1 on DP-related issues and provides input to the STA on issues that cut across major programmatic lines within the Department. The DSTA/Defense has responsibility for cross-cutting assessments of weapons-related R&D programs and the DOE multiprogram laboratories for which DP-1 is the CSO. These activities include coordinating laboratory institutional planning and Laboratory Appraisals, and recommending on the general scope and level of laboratory activities. Within DP, the DSTA/Defense assumes a primary role in reviewing and approving overall LDRD and work for non-DOE sponsors at the laboratories assigned to DP for institutional management, managing DP programs in technology transfer and education, and serving as the principal DP liaison to outside scientific organizations.

Two Deputy Science and Technology Advisors are established in the Office of the STA for the nonweapons-related programs of the Department. The DSTA/Civilian R&D assists the STA with his responsibilities for scientific and technical advice on DOE R&D activities, as described in the above section on this topic. The DSTA/Civilian R&D oversees a staff that is expert in both the basic and the applied R&D programs of the Department and that maintains a current awareness of key issues facing these programs. The DSTA/Civilian Laboratories assists the STA with his responsibilities for the institutional oversight of the DOE multiprogram laboratories, as described in the above section on this topic.

Several existing elements of ER that carry out activities of a departmental scope, in addition to the Office of University and Science Education Programs, are transferred to the Office of the STA: the Office of Program Analysis, the Office of Field Operations Management, and the Science and Technology Affairs Staff.

Beyond these elements, budget authority and personnel will be allocated to the Office of the STA and the Office of Defense Programs to support the additional functions and responsibilities called for in this Notice.

IMPLEMENTATION

I consider the reorganization of assignments outlined above to be necessary if the Department of Energy is to respond to future challenges in science and technology. To implement these changes in detail, the STA, in coordination with appropriate departmental elements, shall recommend for my approval revisions to DOE Orders pertaining to laboratory institutional planning, laboratory appraisals, non-DOE funded work, and LDRD. If needed, the STA shall lead the development of an additional DOE Order regarding laboratory management, with input and concurrence from other CSOs and PSOs.

The STA and DP-1 shall prepare a memorandum of agreement (MOA) concerning the reporting relationships and appraisal procedure for the DSTA/Defense. The STA and DP-1 shall also undertake a management review of the personnel and budgetary requirements of the enhanced responsibilities described above, and provide me with recommendations on the resources that will be needed to meet these requirements.

The STA and PE-1 shall prepare a MOA to coordinate their roles and

responsibilities for science and technology policies and analyses.

The STA shall consult with PSOs with ongoing basic and applied R&D programs in the development of the organization headed by the DSTA/Civilian R&D.

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